# Multiple marginality and the emergence of popular transport

# Multiple Marginality and the Emergence of Popular Transport: 'Saloni' Taxi-Tricycles in Abidjan, Ivory Coast

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## Abstract
Popular transport is the most significant form of urban mobility in the majority urban world and will continue to play an important role even as cities around the world overhaul and upgrade their transport systems. Since January 2019 a new type of popular transport, taxi-tricycles locally named "salonis," has taken root at the peripheries of Abidjan, Côte d'Ivoire. This article offers an initial description of this new mode of mobility, the service it offers, the labor force it draws on, the forms of regulation that govern it, the spatial practices it has engendered, and its implications for sustainable urban mobility. We show that this new transport option has evolved from within the existing norms and practices of the city's existing popular transport sector. Arguing that salonis have emerged at the intersection of multiple overlapping marginality – spatial, infrastructural, socio-economic, legal, and regulatory – we contribute to multi-disciplinary conceptualization of urban margins as a site of infrastructural creation and the production of space. Based on our analysis, we posit three possible future trajectories for salonis: illegality, expulsion, and experimentation.

## Key Words
urban mobility, marginality, emergence, innovation, sustainable urban development

## Introduction
Rapidly growing cities like Abidjan are at a critical juncture for urban mobility. The massive investments in urban infrastructure, ranging from highways and flyovers to trains and bus rapid transit systems, that are transforming African cities could either establish pernicious path dependencies towards socially inequitable and carbon intensive forms of auto-mobility, or, model alternate modes of equitable and inclusive low carbon mass transport. But these internationally financed state projects are not the only

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sources of transport innovation in African cities. Our aim in this article is to identify geographies of transport innovation beyond the well documented cases of BRTs and digital platforms by examining the emergence of new transport options within the popular transport sector.

Comprising mini-bus services, motorcycle taxis, so-called bush taxis, and a proliferation of other forms, popular transport – otherwise known as informal, artisanal, or para-transit – has been the most significant form of collective mobility in the majority urban world for decades (Uteng and Lucas, 2018). A wealth of multi-disciplinary research on these infrastructures explores their relations to urban politics (Lombard, 2006; Fourchard, 2010; Heinze, 2018), their labor conditions (Diaz Olvera et al, 2015; Rizzo, 2017), the social practices that constitute them (Ibrahim & Bize, 2018; Doherty, 2020), their aesthetics (Agbiboa, 2017; Matlon, 2015), and efforts to reform them (Schalekamp, 2017; Klopp and Cavoli, 2018; Ferro and Behrens, 2015), as well as debating the definition and utility of the concept of informality to describe them (Abeto Boka, 2006; Behrens, McCormick and Mfinanga, 2015; Ehebrecht et al, 2018, Godard, 2002). Irene Kassi (2007, p. 18-20) argues that the term informal does not accurately describe this type of transport in Abidjan, particularly because of the multiple ways the sector has historically been subject to taxation, spatial regulation, and municipal authorization. Instead, we use the term popular, which captures the social composition of those involved in the forms of transport under consideration here, both as workers and as passengers. It "refers to a wide range of actors producing urban space mostly without evident leadership or overarching ideology, but with a shared interest in producing urban space for themselves as well as their community" (Struele et al, 2020, p. 2). This approach to popular urbanization emphasizes the incremental ways that the city is a collective product of its residents. We find this formulation particularly useful for our primary analytical concern here, namely, the marginal conditions of emergence in which transport innovations from below take place. The emergence of new forms of popular public transport offers a particularly compelling illustration of this kind of spatial production and appropriation. Not only is a new urban service produced, it is a particularly crucial aspect of the urban fabric insofar as it constitutes the material basis upon which people in the peripheries realize their ability to participate in urban life (Attoh, 2017). Popular transport enables movements that bind the city together, connects places, and form the condition of possibility for the development of new territories (Kassi-Djodjo, 2010; Evans, O'Brien and Ng, 2018).

Abidjan's urban mobility challenges have been shaped by the combination, since the 1980s, of rapid urban growth (both in terms of population and surface area) and the collapse of Sotra, the state-owned transport company. Abidjan's population has expanded from 17,000 in 1934 when it was made the colonial capital, to 2 million according to the 1988 census, to nearly 5 million in 2014 (INS, 2014). This growth has resulted in increasingly long commutes, more road congestion, and increased transport costs. According the World Bank, "households in urban areas are faced with the difficult choice between overcrowded and expensive living conditions in central areas near existing services or unserved development on the urban periphery (often informal) coupled with unaffordable transport costs" (Fall and Coulibaly, 2016, p. 47). The country's economic crises of the 1980s and 1990s and the structural adjustment policies imposed by the World Bank exacerbated these issues. At a decisive moment of urban growth, the Ivorian government withdrew direct support for public services such as transport. In response to corruption and mismanagement within Sotra that deepened in the 1980s, the administration cut its budget and withdrew subsidies, ensuring that Sotra could no longer meet the population's transport needs. Private car ownership rates remain low – in 2013 only 8.9% of Abidjanais households owned a car (World Bank, 2019) – but demand for mobility is high as the city expands outward (Abeto Boka, 2006). In the 1980s, these conditions engendered the re-emergence, of popular transport options that were active from the 1930s-1964. Today, gbakas (minibuses) and wôrô wôrôs (shared taxis) together provide 77% of daily motorized trips in Abidjan (World Bank, 2019, p. 10). This type of transport successfully took root

in the 1980s and 1990s due to its flexibility, speed, and low costs (Dindji Mede, Koffe, and Bohousson, 2016).

Three decades after the collapse of Sotra, the Ivorian government is making urban transport a renewed priority, launching a series of public-private partnerships to liberalize and develop lagoon-based ferry transport, establish a metro line on an existing rail track, construct a bus rapid transit system, and purchase a fleet of new buses. These capital-intensive state projects, developed in partnership with the World Bank, the French government and French construction and infrastructure companies, and the Japanese International Cooperation Agency aim to overhaul urban mobility and transition the city towards mass transit. While these projects broadly aim to formalize and professionalize the existing popular transport sector, the place of these systems in the future of the city remains unspecified and ambiguous. In its treatment of "the problem of the informal sector" (JICA, 2015, p. 152), the 2015 Urban Transport Master Plan for Greater Abidjan prepared by JICA exemplifies this ambiguity. In addition to proposing a suite of new road-building and transport infrastructure projects, the plan frames popular transport as a trend to reverse because, while it has been a convenient response to population growth in peripheral areas, it has led to increased congestion in the city. Without detailing the complex political negotiations that would be involved or the effects on drivers' livelihoods (Lombard, 2006; Schalekamp, 2017), the Master Plan states that the gbaka and wôrô wôrô systems will be "re-engineered to support the line haul high-capacity corridors as feeders," (JICA, 2015, p. 15) through formalization and eventual replacement with a feeder minibus service, while gbakas may become "end-line service providers" operating within strict geographic constraints. Here, we can see how the conceptual language of informality operates within discourses that devalue, marginalize, and displace established forms of popular mobility. Nonetheless, the experience of other cities shows that even when plans call for a complete overhaul of transport systems through transitions to mass transit and formal infrastructure, popular transport continues to play an important role, giving rise to complex hybrid systems (Ferro and Behrens, 2016; Klopp and Cavoli, 2018; Schalekamp 2017). Even as the national government and World Bank (2016) "re-imagine Ivorian cities" through integrated investments in logistics industries and mass transport projects, popular transport will continue to occupy a marginal position, offering vital mobility services, particularly in peripheral areas where they serve critical last-kilometer connections.

But "informal transport" is not a static problem to be solved. Just as gbakas and wôrô wôrôs emerged to meet the needs of the urban population in the 1980s and 1990s, the popular transport sector continues to evolve new services through a dynamic relationship between the urban fabric, global markets in low-cost vehicles, and the social practices of transport workers themselves. In this article, we examine the case of one such emerging technology – three-wheeled taxis locally named *saloni* that began operating in Abidjan in January 2019. We describe the geography of its emergence in the margins of the city, the service it provides passengers, the composition of its labor force, and the forms of regulation developing around the sector. We argue that this new mode of transport has emerged at the intersection of multiple marginalities – spatial, infrastructural, legal, regulatory, and socio-economic – and that these marginal conditions have structured both the form that the taxi-tricycle has taken and how salonis are implicated in the production of space at the urban periphery.

## Methods

This study is based on fieldwork conducted by the first two authors between February and June 2019. The taxi-tricycle routes we observed were initiated in January 2019, growing rapidly, and consolidating their place over the study period. This afforded us the opportunity to observe the emergence of new forms of popular transport infrastructure in process. We identified four sites in Abidjan where taxi-tricycles were

in operation (Figure 1), two in the commune of Yopougon (Koweit and Kouté) and two in Abobo (Akéikoi and Bocabo). We made repeated visits to each route, mapped the lines, observed the spatial practices as they evolved, and discussed operations with drivers, passengers, and syndicalists.[2] We conducted semi-structured one-on-one interviews and focus groups with drivers, owners, and syndicalists at each line. Group interviews took place at the busy hub at the head of each line where drivers wait before departing, as such, the composition of the group was constantly changing as drivers came and went. We also conducted in-depth interviews with the founding drivers and investors at each line. Thirty-three brief informal interviews with passengers permitted us to understand their usage of salonis and how the new transport mode was being integrated into their everyday routines. In addition, we used a questionnaire to gather information about drivers' work experience, working conditions, future plans and basic demographic information (gender, age, marital status, number of children etc). We surveyed 56 drivers who, based on the number of vehicles in service on the four lines studied, represent an estimated 75% of the total taxi-tricycle work force. We have also drawn on our prior research experience on mobility elsewhere in Côte d'Ivoire and on popular transport in Abidjan (Kassi-Djodjo, 2010; Kassi-Djodo et al, 2016).

| | **Yopougon Kouté** | **Yopougon Koweit** | **Abobo Akéikoi** | **Abobo Bocabo** |
|---|---|---|---|---|
| Estimated number of vehicles in operation at time of questionnaire | 8 vehicles | 20 vehicles | 18 vehicles | 2 vehicles |
| Estimated number of drivers at time of questionnaire | 17 drivers | 33 drivers | 25 drivers | 2 drivers |
| Extended group interview with drivers and syndicalists | 6 drivers, 2 syndicalists | 7 drivers, 3 syndicalists | 4 drivers, 2 syndicalists | 1 driver, 1 syndicalist |
| In-depth interview with initial investors | 2 investors | 1 investor | 1 investor | - |
| Passenger informal interviews | 10 passengers | 22 passengers | 11 passengers | - |
| Driver questionnaire | 13 drivers | 24 drivers | 19 drivers | - |
| Periods of observation (1-3 hours) | 4 | 5 | 3 | 1 |

Table 1: Summary of data collection methods.

[2] Syndicates are important actors in the regulation of the popular transport sector who control set territories, charge drivers for access, and manage points where passengers load and unload from vehicles.These organizations are referred to locally in French as *syndicats* the term for trade unions. They evolved from two national state-controlled unions of transporters, but today bear little resemblance to trade unions. Wôrô wôrô drivers interviewed by Jacob Doherty in 2019 often identified them as "faux-syndicats" (fake unions) or as criminal rackets. We use the word syndicate in English here to retain the local vocabulary while simultaneously the aspect of racketeering that drivers critiqued.

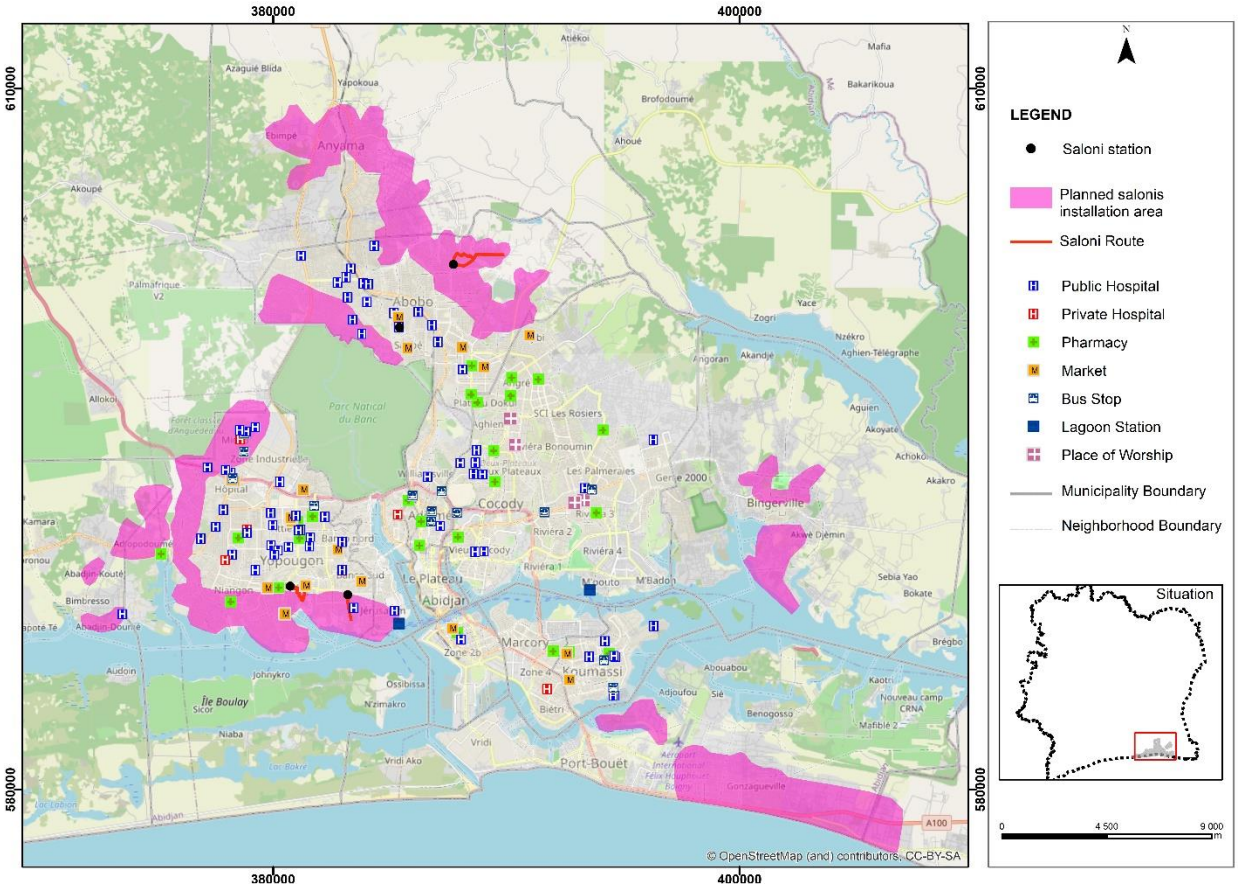


Figure 1: The four saloni route points of departure in Abidjan. (Prepared by Felix Kouame N'Dri)

## Multiple Marginalities

To understand the socio-spatial conditions of emergence for salonis, our conceptualization of multiple marginality draws on several disciplinary traditions to theorize the combined context of spatial, infrastructural, legal, and socio-economic forms of marginality. For sociologists like Loic Wacquant (1996), "advanced marginality" refers to social conditions of exclusion from the normative institutions of society combined with violent inclusion in its carceral apparatus, a condition spatially manifest in institutions like the prison and the *banlieue*. More broadly, social and political marginalization is an effect of inequalities at multiple scales and should be understood as a mode of unequal incorporation into, rather than separation from, society (Lancione and McFarlane, 2016; Perlman 2004).

Economic anthropologists have identified margins as important sites of creativity and production. Jane Guyer (2004) notes the triple economic meaning of margins as a condition of peripheral inclusion into the world economy in neo-Marxist theory, as the object of calculations concerning the costs and revenues earned by additional units of production, and, in everyday usage, as small scales that are almost inconsequential. Her work on the long-term histories of capitalist markets in West Africa illustrates how the disjunctures and asymmetries between multiple, overlapping, and heterogeneous regimes of value, currency, and calculation that characterize these unevenly incorporated peripheries make possible the creation of "gainful margins" for traders (Guyer, 2004, p. 18). Likewise, Janet Roitman (2004) documents the way border zones at the margins of multiple states become critical spaces both for the arbitrage of

marginal differences in market prices and the for the extraction of rents from these activities by state actors charged with policing national margins. Scholars of informal economies have observed that such activities are simultaneously marginalized and critically important (Adebanwi, 2017; Roy, 2009). The "informal sector" is, broadly, legally ambiguous and ill-defined, overlooked by planners, and culturally devalued, but nonetheless forms the basis of livelihoods and provision of vital infrastructures for the majority of the world's urban population. Not simply a question of spatial limits, then, legal anthropologists have argued that "the margins of the modern state [are] where uncertainty obtains," (Asad, 2004, p.286), an internal seam within the state where the law, its agents, and its application are fundamentally provisional and contingent. In this view, marginality is a legal condition defined by the ambiguity and arbitrary application of the law.

In geography, debates around the theory of planetary urbanization have proposed new ways of locating and defining the urban periphery, with sites such as shipping routes, hydropower dams, data storage centers, and even satellite orbits being understood as the margins of an extended urban fabric (Brenner and Schmid, 2015). The periphery is thus a relative and relational category. In our case, to understand the emergence of new modes of popular transport and the production of everyday mobilities, we use a more limited morphological understanding of the periphery to refer to sites of relatively recent housing at the infrastructural edges of Abidjan's paved road network that are undergoing waves of new construction as the city expands outward. The sites we studied are themselves connected to peripheries elsewhere for the provision of electricity, water, food, construction materials, as well as labor. Salonis themselves are evidence of new configurations of the urban fabric and of logistics industries that have made it viable to import low cost new vehicles manufactured in China and India. As research on similar import networks elsewhere in Africa has illustrated, popular mobilities are not a residual or local phenomena, but an unfolding aspect of global connections initiated and sustained by Asian manufacturers and African traders, drivers, mechanics and others (Khan Mohammad, 2016; Tastevin, 2011).

The geographies under consideration here are also liminal, "betwixt and between the positions assigned and arrayed by law, custom, convention, and ceremonial" (Turner, 1969, p. 95). In this classic anthropological definition, liminality refers to the symbolically charged but unstable, uncertain, and normally temporary condition of being in-between two discrete and standardized social positions. Geographers have used this idea to theorize a range of spatial constructs such as gaps, borders, thresholds, and voids characterized by their relativity, ambiguity, and precarity, spaces "where life as usual is suspended, or a socio-spatial rift where new kinds of collective politics and forms of citizenship are produced" (March, 2020, p. 3). Conceptually, then, liminality emphasizes that margins are not simply edges, but often complex, contested, and socio-culturally productive borderlands between properly defined spatial and temporal categories. Salonis have taken root in spaces that are in such a transitional phase between spontaneous and planned development, between the construction of homes and the anticipated arrival of paved roads and other extensions of the municipal grid. Likewise, most saloni drivers are themselves liminal personae, youth temporarily suspended in "waithood" (Honwana, 2012), in between the categories of childhood and adulthood. As in "hustle economies" around the world (Thieme, 2017), liminal youth in Abidjan assemble precarious livelihoods at the margins of the city in ways that (re)produce urban life and urban space. By bringing these multiple ways of theorizing and identifying marginality together, we locate the emergence of salonis at the intersecting margins of Abidjan, its infrastructure, its legal and regulatory systems, and its socio-economic organization.

## Saloni Origins

The name saloni is derived from a Hindi soap-opera that airs every afternoon on Ivorian TV. Seeing vehicles reminiscent of the rickshaws that appear on the show, passengers gave this new form of transport the nickname saloni, the name of the main character. Some Abidjan residents were familiar with taxi-tricycles from their own experience, telling us they had seen them in operation in Togo, Sierra Leone, as well as elsewhere in Ivory Coast. While three-wheeled passenger taxis have been in operation in other areas of West Africa for several years, they are a new phenomenon in Abidjan, where motorcycles are uncommon, and moto-taxis prohibited.

Motorized tricycles first entered Ivory Coast in the aftermath of the 2010-11 post-election conflict.[3] The new administration introduced them along with other development projects as a means of absorbing the labor of young men demobilized from the various armed forces in the county. Initially oriented towards small freight transport, these three-wheeled pick-ups were granted to ex-combatants so they could launch businesses making deliveries and transporting agricultural goods to markets (Kassi-Djodo et al, 2016). In the towns and villages of Northern Ivory Coast, the tricycles soon took off alongside motorbikes as a form of passenger transport, giving rise to a growing market for specifically designed passenger moto-tricycles centered in Korhogo. Depending on where they are purchased, new vehicles cost between 800,000 and 1.2 million Fcfa (1,200-1,800 Euros), about 25% of the cost of the cheapest imported second hand car from Europe. Three brands dominate the market: Apsonic and Haojin from China and Royal from India. While the passenger tricycles are new to Abidjan, and two-wheel moto-taxis have never been permitted to establish a presence in the city, three-wheelers have been in use in the city for urban deliveries and goods transport since 2011. This means there are robust distribution networks for the passenger vehicles and for spare parts, as well as a cadre of experienced mechanics and drivers. As Yann Philippe Tastevin's (2011, 2015) work on the origins of auto-rickshaws in Egypt and Congo illustrates, these networks of skilled mechanics and retailers are vital for the popular uptake of new technologies and their territorial dissemination.

[3] After elections in 2010 in which the incumbent president Laurent Gbagbo refused to cede power to the winner, Alassane Ouattara, the country fell into a year-long civil war that killed approximately 3,000 people.


Figure 2: A saloni departs from the head of a route in Yopougon. (Photo: Jacob Doherty, May 1, 2019)

## Peripheral Mobility

The salonis we observed operate at the peripheries of the communes of Yopougon and Abobo where they provide a low-cost – 100 FCFA (15 Euro cents) per ride – last-mile service connecting arterial roads to popular neighborhoods. Yopougon is situated on a plateau to the West of the city and separated from Plateau (the city's Central Business District) by Banco Bay. It was planned in the 1970s during the country's post-independence economic boom by authorities seeking to increase housing supply for Abidjan's growing population (Steck, 2008). The commune was planned on the basis of an automotive imagination: it was far from the city center (where civil service jobs were based) and connected only by a highway. Planners projected that the urban automobile fleet would grow in tandem with the city and that new road construction would form the basis of urban mobility. The car-suburb pairing was the symbol of the emergence of the middle class that embodied the fruition of the Ivorian Miracle. However, in 1981, under structural adjustment, the budget for urban development was slashed and the state-led development of Yopougon gave way to an era of privatized housing developments and spontaneous settlements (Freund, 2001; Semboloni, 1999). As a result of the fiscal crisis the urban plan was not completed, with road construction in particular abandoned. This left Yopougon badly connected to the rest of the city. The crisis also badly affected the middle class, placing the dream of private automobility out of reach. Popular transport re-emerged in this period, becoming the basis of the urban transport system in the commune.

The population, numbering 1,071,543 (INS, 2014), and the number of unplanned *quartiers précaires* continued to increase through the 1990s, while Yopougon became the center of cosmopolitan youth culture, popular music, and opposition party politics. Since the 2010-11 crisis, Yopougon has seen large private investments in housing, retail, and industry alongside increasing expansion of its southern and western peripheries. As part of the new suite of urban mega-projects in the city, construction is underway on a new bridge across Banco Bay and an East-West BRT route that will connect Yopougon to the CBD in Plateau and on to the eastern suburbs Cocody and Bingerville. Currently, Sotra buses, gbaka minibuses, ferries, and clandestine inter-communal shared taxis connect Yopougon to the rest of Abidjan, while wôrô wôrôs (shared taxis) provide the bulk of transport services within the commune. The latter operate primarily without set routes, with destinations set by the first passenger and at drivers' discretion. As most wôrô wôrô drivers prefer not to take their vehicles off paved roads onto slower and more taxing dirt roads, the unpaved southern and western peripheries of the commune suffer from a lack of viable transport options, served primarily by the oldest vehicles in the wôrô wôrô and gbaka fleets that no longer pass mechanical inspections and thus lack the required paperwork to operate on main roads. Salonis first began to operate in these under-served marginal territories.

As Figures 3 and 4 show, in Yopougon, the two saloni lines connected higher-density residential areas, busy commercial districts, a maternity hospital, and a market, to the network of main roads and transit options in the commune. The ends of both these routes were adjacent to the end point of gbaka lines, SOTRA routes and roads with wôrô wôrôs circulating with a range of destinations across the commune. Almost all of the passengers we surveyed continued their journeys using one or more onward modes of collective transport. In Kouté, the local community leaders introduced saloni tricycles to take local control of the transport services in the neighborhood, an ethnic Ebrié village, and to replace the aging wôrô wôrô vehicles that had been serving the community. At Koweit, an investor from Kouté identified a route with a very high demand for transport due to major residential construction projects and established the salonis there to supplement the existing gbaka services, gradually supplanting them.


Figure 3: Saloni route in Kouté, Yopougon. (Prepared by Felix Kouame N'Dri)

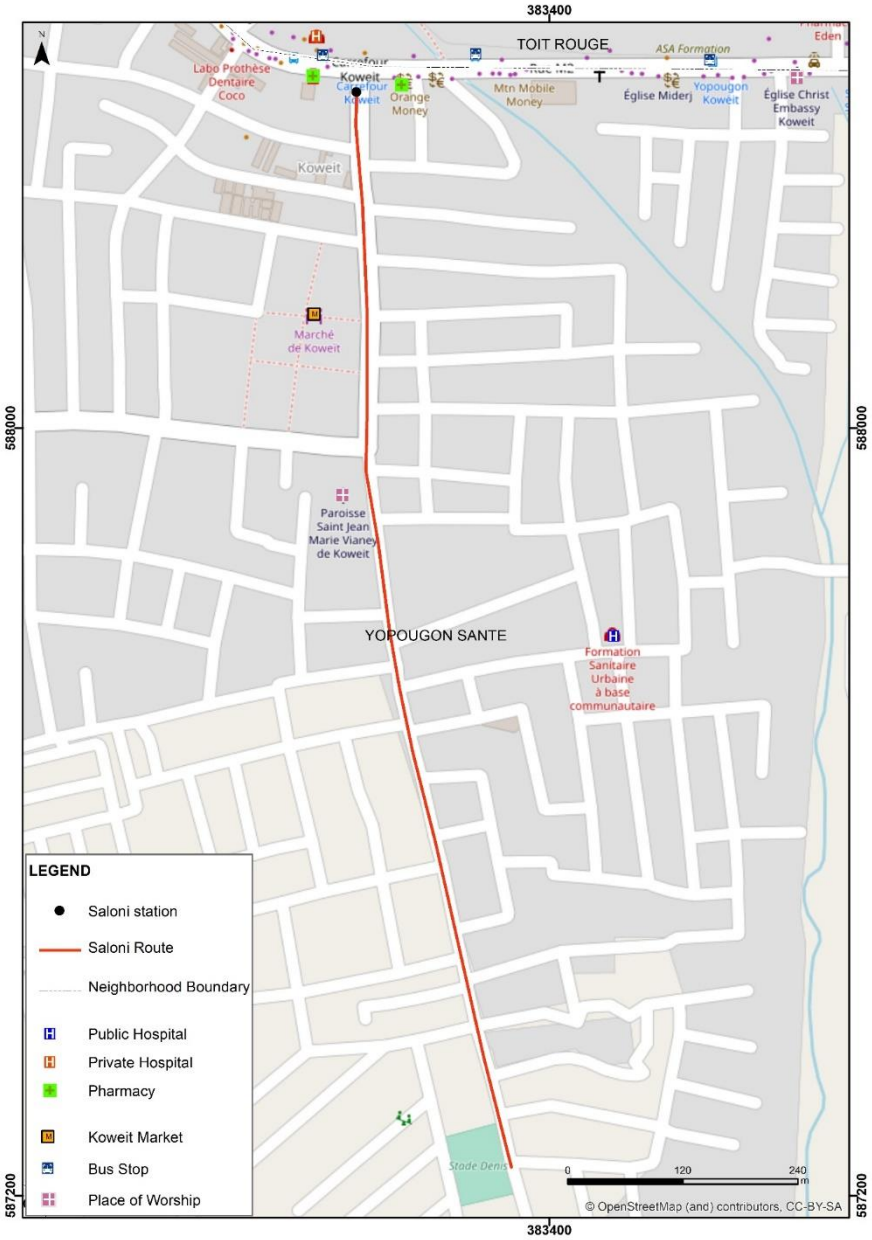


Figure 4: Saloni Route in Koweit, Yopougon. (Prepared by Felix Kouame N'Dri)

Abobo, the city's second most populous commune (population 1,030,658 (INS, 2014)) and its most densely occupied, is widely stigmatized as impoverished, dangerous, and criminal. The commune grew around a colonial-era train station, but without formal planning and outside the bounds of the legal land market. Planners largely ignored the commune: it saw the construction of only 1,760 units of public housing, representing under 3% of the state's housing investment in Abidjan, compared to 24,254 units representing 40% of housing construction built in Yopougon (Parenteau and Charbonneau, 2005, p. 425). Nonetheless, the population expanded rapidly through the 1970s, as the booming city attracted migrants from the rest of the county and across West Africa. Employment did not keep pace with population growth as industries continued to prefer to locate in existing industrial areas near the port. As a result, the

area is characterized by a proliferating informal economy and by long distance commuting to far flung workplaces elsewhere in the city.

While Abobo was connected to the center of town by an expressway in 1979, the commune was not served by the official bus company. Popular transport in the form of gbakas and wôrô wôrôs emerged as early as the mid-1970s to meet the mobility needs of the growing population. Today, Abobo continues to be served primarily by the popular transport sector, although the planned Abidjan metro's North-South rail line will connect it to Cocody, Plateau, and the south of the city. Transport has also been long establish as a crucial economic sector, as the commune is "is steeped in a mechanical subculture" and economically driven by "small-scale trade and professions linked to passenger transport: drivers, mechanics, tire technicians, metal workers, and new or used spare parts salesmen" (Konaté, 2017, p. 333). Transport likewise provides a central means of earning a livelihood for the commune's low-income youth, something that was particularly visible in the taxi-tricycle lines in the commune. As in Yopougon, these primarily served to connect recently constructed settlements along unpaved roads to main roads with other means of transport.

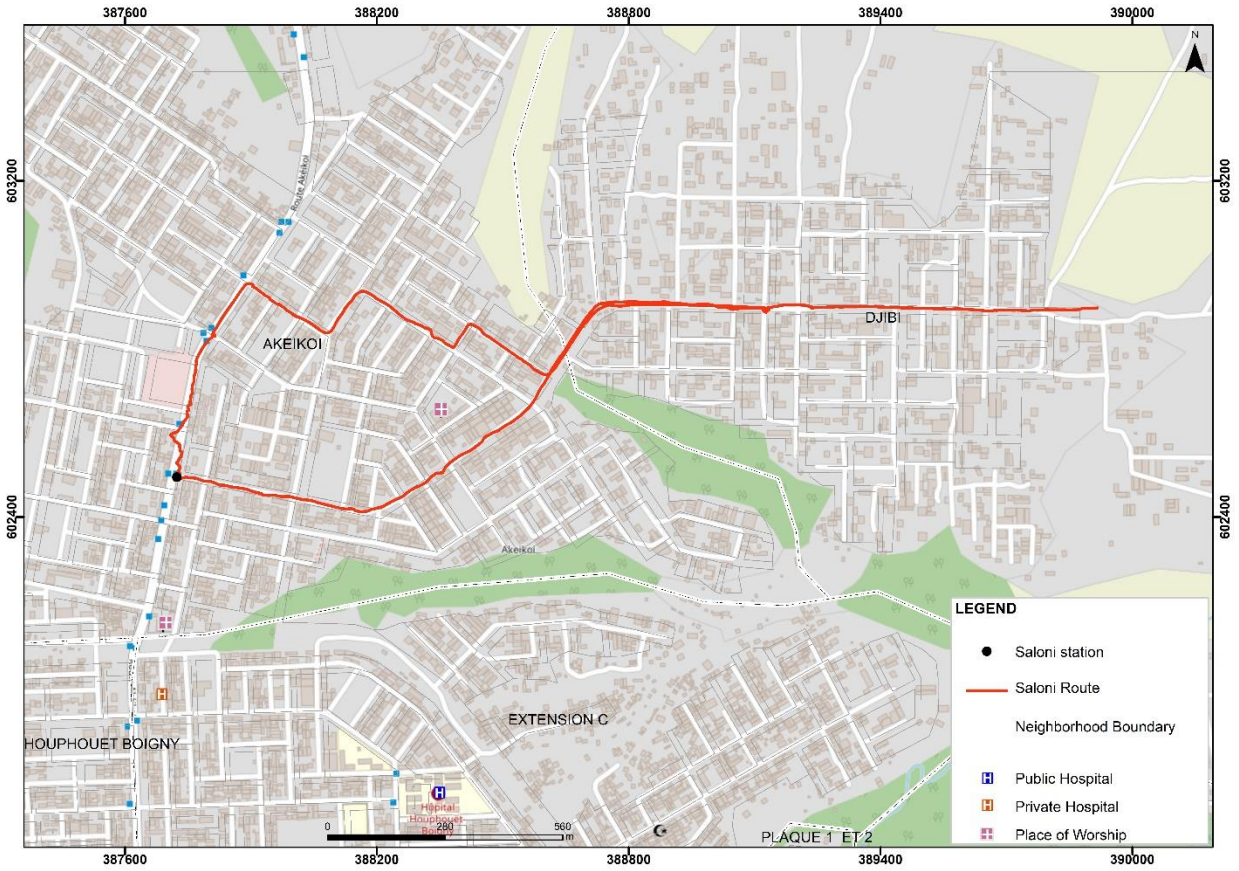


Figure 5: Saloni route in Akéikoi, Abobo. (Prepared by Felix Kouame N'Dri)

At Akéikoi (Figure 5), the saloni route connected a recently constructed low-density, low-rise residential area at the edges of Abidjan with an unpaved road to a busy market situated on the main paved North-South Axis, with regular gbaka minibus, Sotra buses, and wôrô wôrô connections to the center of Abobo and Anyama communes as well as to the center of the city in Adjame. This line was founded at the initiative of local residents: a recent high school graduate with the financial support of his functionary

father. Having seen taxi-tricycles in operation in the north of Ivory Coast, they thought salonis would be a good option for their neighborhood and bought two vehicles from Korhogo in January 2019. The original idea was that tricycles would operate along the same route already served by gbakas, but extend it 2km further into the lower density peri-urban periphery to serve residents there. Since their introduction, three-wheelers have taken over the route and the number of gbakas on the route has fallen dramatically. As in Koweit, the salonis have quickly outcompeted the aging gbakas, whose operators have withdrawn them from the neighborhood. Even so, the remaining gbakas at Akéikoi did have priority to load prior to salonis at the head of the line.

As Kassi-Djodjo (2010) has shown, the evolution of popular transport permits the production of urban space at the peripheries of Abidjan in places like Abobo and Yopougon. Popular transport like salonis serve these far flung and underserviced areas, and, in so doing, make them viable sites for settlement and construction, integrating the margins of the city into the urban fabric.

## Infrastructure at the Margins

The three lines we primarily studied provide the same service: they are a first/last-kilometer transport option linking residences to urban amenities. Serving predominantly residential peripheral areas via unpaved roads, they connect marginal areas of the city to main roads where other forms of transit are available. Three-wheelers emerged in a specific infrastructural and regulatory context at the margins of the city's road and transport networks. The routes they operate on are unpaved roads that alternated between being extremely dusty and being overwhelmed by puddles and mud (Figures 6 and 7). Drivers pointed out the three-wheelers are especially well suited to navigate these bumpy uneven roads, while other vehicles are likely to get stuck.

The spatially uneven enforcement of traffic laws produces these peripheral areas as liminal spaces in which both the oldest and newest vehicles operate. Because these routes are away from main roads, they are under less supervision by traffic police. As a result, they were served by very old vehicles, both minibuses and shared taxis. Dubbed *tianboro* in Malinke, referring to their end of life status, these did not satisfy safety and emissions standards, did not have insurance, and could not operate elsewhere in the city or on main roads where they would subject to more stringent police controls. In addition to being extremely polluting, passengers saw these *tianboro* vehicles as old, uncomfortable, dirty, and undignified. Salonis, on the other hand, are new firsthand vehicles imported for purpose directly into the unpaved city. As such, passengers perceived the emergence of taxi-tricycles as an upgrade in their transport options. Compared to dilapidated minibuses, salonis offered a comfortable, clean, and cool ride. Importantly, they also loaded and departed more frequently, facilitating passengers' mobility. Both tricycles and minibuses operate on a fill and go system, but salonis would load and depart with 4 or 6 passengers on board, compared to the 12 to 20 needed to fill a minibus. At every line we observed, even during the slow afternoon period, a saloni would depart the head of the line every 3-5 minutes. This is the basic reason Salonis had been able to out-compete gbakas on these routes, as many passengers preferred to wait for a quick-to-fill empty saloni rather than board a slowly-filling minibus.

A fundamental difference between the saloni service and the moto-taxi services provided in myriad other African cities is that rather than offering on-demand door-to-door services, salonis operate primarily along fixed routes. Each line we observed had a clearly defined head and terminus. The head of each line abutted a major paved road where drivers queued to load passengers. The social practices of salonis and moto-taxis nonetheless overlap in many ways. As with motorcycle taxi stands in Nairobi, drivers wait together to create the "persistent, physical copresence [through which] a fraction of the roadside becomes

an enduring urban infrastructure" (Ibrahim and Bize, 2018, p. 74). Members of the local syndicate also stationed themselves at the head of the line to guide passengers, control drivers loading order, and collect operating fees from drivers. The terminuses were less busy and controlled spaces that marked the official ends of the line where drivers waited to re-fill their vehicles and make the return journey. While drivers were also willing to extend their service beyond the terminus or depart from the set route at passengers' request to deliver them directly to their doors for an additional fee, the standard practice was to operate along the set route.

Figure 6: A loaded saloni departs the terminus at Akéikoi, Abobo. (Photo: Jacob Doherty, April 9, 2019)


Figure 7: Salonis navigate the muddy road at the head of the line at Akéikoi, Abobo. (Photo: Jacob Doherty, May 8, 2019)

For passengers, salonis offer a low-cost mobility option: a standard fare is 100 Fcfa (15 Euro cents), with the option to pay extra for a special direct beyond the designated route. Passengers also reported that taxi-tricycles provided fast access to their homes, a welcome alternative to walking long distances under the sun, and an easy to use low-cost service that allowed them to transport shopping, commercial goods, and other small to medium size loads. They cited travel to/from work, shopping and other errands, visiting family and friends, inspecting construction projects, and delivering goods to customers as the main reasons for using the service. Salonis offered an especially valuable service for women, whose journeys were often more localized. In Abobo, for example, the majority of those who did not make onward connections were women making local trips to and from the market at the end of the route. As one passenger explained, "this helps me a lot because it is so fast. I can drop my kids at school, come to the market to buy food, and return home to prepare food before it is time to collect them at midday."

While conditions of marginality have been central to the emergence of saloni lines in Kouté, Koweit, and Akéikoi, the example of Bocabo offers an illustrative comparison, as salonis failed to take off and are unlikely to replace the wôrô wôrôs serving the area. Only two salonis were in operation in this high-density, mixed residential-commercial district at the center of Abobo. No other taxi-tricycles were introduced to this busy paved route that was well serviced by the officially documented and fully licensed wôrô wôrôs. The local syndicate recognized the need for taxi-tricycles nearby – in an unplanned and

congested area where the unpaved roads become impassable during the rainy season – but, in Bocabo, the territory was not sufficiently marginal – neither unpaved nor undocumented - to be well suited for the salonis to take root.

## Liminal Labor

With some minor variations, the economic organization of the sector mirror those present in the existing popular transport system in the city (Kassi 2007). The extent to which these are standardized across the sector speaks to the degree of formality that exists within the popular transport sector, and thus the limits of the concept of informality for describing this style of transport infrastructure. Though a more extensive critique of the concept of informal transport is beyond the scope of this paper and has been developed elsewhere (Ehebrecht, Heinrichs, and Lenz, 2018; Rekhviashvili and Sgibnev, 2019; Stasik and Cissokho, 2018; Xiao, 2019), we note here that salonis not only exhibit consistent patterns of standardized labour and property relations, but also operate along set routes, pay certain municipal fees to operate, and are subject to a variety of forms of regulation.

All three lines exhibit standardized forms of labor relations with very little variation. In 95% of cases, drivers pay a daily rental price, the *recette*, to operate the tricycles. Two drivers typically operate each vehicle, with one recognized as the primary *titulaire* driver and the other as a secondary "contractual" driver. The amount of the daily rental varies from line to line, but is consistent within each line: 89% of drivers paid the same *recette* as others working on a given route (7,000 Fcfa [€10.66] at Kouté and 8,000 Fcfa [€12.20] at Koweit and Akéikoi). In addition, drivers are responsible for paying for fuel and for daily operating tickets and loading charges from syndicates. Owners, on the other hand, were responsible for paying for one-off and ongoing registration fees, insurance, and maintenance costs. In the typical arrangement, drivers do not receive a set salary, but are able to operate the tricycle one day a week, usually Sunday, without paying for the rental. 88% of drivers worked in this way. Exceptions to this standard arrangement included the relatively few owner-operators, as well as some, but not all, cases where the driver was the child or younger brother of the owner.

Salonis are not only situated at the spatial and infrastructural margins of the city, but operated by workers in liminal social positions, betwixt and between categories of childhood and full adulthood. Alcinda Honwana (2012) has characterized this ever more populated social category as "waithood", a life phase defined primarily by in-betweenness and uncertainty about the future. Waithood is the lot of the generations that have come of age in the aftermath of structural adjustment, where stable jobs and living wages are increasingly rare and full participation in social and family life is an ever more elusive goal. While educated young people seek secure jobs, they are "all but excluded from the formal sector (both private and public)," (Lefeuvre et al, 2017, p. 222) and face unemployment rates of 56% (République de Cote d'Ivoire, 2013).

At all four lines, all of the saloni drivers were men. For many drivers, particularly for those who were current high school students or very recent graduates (20%), driving a three-wheeler was their first income earning experience. This reflects the overall youth of the salonis' labor force. The age range in our sample was 17 to 45, with an average age of 23 and only 15% over the age of 30. Moreover, only 13% of drivers were married and 74% did not have children, adding to the picture of an industry operated primarily by social juniors. By contrast, in other sectors, shared taxis in particular, owners prefer to let vehicles to married men with children who, it is assumed, are more responsible drivers. This difference can be explained in relation to the novelty of the three-wheelers that attracted an especially young labor force, and to comparatively lower risk of allowing less experienced young drivers to operate lower-cost

vehicles. Nonetheless, the age of drivers was one of the most common passenger complaints about the new mode of transport and was often cited as the reason for bad driving and accidents.

While half of all drivers had prior experience working in and around the transport business, relatively few had actually worked in minibuses either as drivers (5%) or apprentices (7%) and none had worked as wôrô wôrô or taxi drivers, reflecting the hierarchies and aspirational career trajectories through the popular transport sector. The most common previous jobs were driving a 3-wheeled pickup to deliver goods (27%) or working as a mechanic's apprentice (7%). Other transport related prior experience included washing cars, painting cars, operating a hand-pushed cart, and driving a tractor. Outside of the transport sector, other prior roles included mason, factory worker, vendor, electrician's apprentice, guard, and farmer. Not only did these low-paying manual jobs not hold much prospect of social mobility or of accumulating money to advance oneself, they were more physically taxing and less social than working as a driver.

As with many transport workers throughout the city, saloni drivers for the most part did not identify their current work as a real job. "Real work" continues to be defined as white collar professions and civil services roles with contracts and air conditioned offices despite the decades-long crises and hiring freezes in the formal sector (Matlon, 2014). Rather, drivers understood their job as a temporary occupation or a means to an end. 21% of drivers reported that they would like to transition into driving a taxi, and 31% identified other transport related occupations, including owning a mechanic shop, driving for a private company, or owning their own tricycle-based delivery company as their preferred next job. While 17.5% of drivers did not have a trajectory in mind, replying that they would take any opportunity that came their way, others identified continuing their educations (10.5%), joining the military or police (8.8%) as their goals.

Drivers cited the reliability of income, the ability to earn cash on a daily basis, and the opportunity to accumulate relatively large sums quickly as the most significant advantages of the transport sector. This quickly accumulated cash, they hoped, would allow them to launch new projects, either education, business, purchasing their own vehicles, or funding an effort to emigrate to Europe. These next projects, funded by earnings from temporary work in the transport sector, would allow them to properly establish themselves, start families, build houses, and support their own little brothers, becoming benefactors of the next generation of young men. This structure of expectations and understanding of this work as transitional echoes findings by Diaz Olvera et al in Togo, where motorcycle taxi drivers work to invest in new ventures. In both cases, however, "the system operates in a way which seems more likely to reproduce existing inequalities than to reduce them" (Diaz Olvera et al, 2015, p. 172).

Nonetheless, transport work is one of the most readily available livelihoods and accumulation strategies for young men in waithood. With low barriers to entry and no formal training required, it is a sector that attracts and absorbs huge amounts of young men's labor in the context of structural unemployment and exclusion from the labor market. Despite the low pay, insecure nature of employment, and risks drivers face, precarious work in taxi-tricycles and similar vehicles is one of the few strategies available to attempt to exit waithood. For example, in a recent study of the Ivorian middle class transport entrepreneurs made up a major part of the most significant block (39%) of the middle class: informal workers who remit a major portion of their income to relatives and aspire to more stable entrepreneurial activities (Bekelynck et al, 2017, p. 215).

Beyond their role provisioning mobility at the periphery of the city then, salonis should be understood as part of a vital source of livelihoods, and aspirational economic trajectories for marginalized liminal young people. The lower cost of three-wheelers compared to used cars makes it more likely that drivers will be

able to graduate to becoming owner-operators. It's too early to say to what extent salonis will in fact enable their young drivers to realize their aspirations, as popular transport drivers in other African cities commonly become stuck in the "struggle economy" (Animasawun, 2017, p. 240) without any upward mobility (Rizzo, 2017, p. 122-139).

## Regulation at the Periphery

Salonis emerged at the margins of the law, in legal-regulatory context defined by multiple, heterogeneous overlapping, and competing, regulatory actors, an ambiguous division of regulatory authority, and the organized under-enforcement of traffic codes. Such conditions exemplify the ways that margins are not confined to the physical edges of the state, but, as Das and Poole (2004) argue, run through it, via the routine practices and uncertainties of law. This regulatory marginality is characteristic of urban governance by informality, in which the state itself produces, engages in, and benefits from informal practices as a central element "of an ensemble of sovereign power and the management of territory" (Roy, 2009, p. 84). Popular transport in Abidjan has always occupied an ambiguous regulatory position, offering an essential public service, but clashing with the image of modernity that the state wishes the city to project as Ivory Coast's window to the world. While authorities have recognized the importance of popular transport for the population, they have largely considered them a temporarily necessary evil and have, as such, never fully integrated popular transport into urban planning, relegating them to legal liminality between competing forms of regulatory authority.

Government regulation has primarily consisted of controlling car titles, issuing various types of permits, and authorizing inspections. Through these various forms of official payments to government authorities, popular transport has become a vital source of revenue that supports municipal budgets in the city, and a source of (Zouhoula Bi 2018, p. 24). On the ground, the regulation of the sector – the organization of routes, the management of stops, and the control of passengers loading – is in the hands of another semi-autonomous actor: transport syndicates. Transport syndicates control the stops where gbakas and wôrô wôrôs collect passengers (Figure 8). They developed alongside the popular transport sector since its inception with the dual purpose of bringing order and security to the otherwise anarchic system and of representing the interests of drivers and vehicle owners. Daniel Agbiboa (2018) has documented a similar evolution of predatory politics in the transport sector in post Structural Adjustment era Lagos where these semi-licit forms of regulation and accumulation are contested through a discourse that distinguishes between real (functional) vs fake (predatory) actors. In Abidjan, drivers across the popular transport sector almost universally resent the presence of syndicates, seeing them as predatory, violent, and unnecessary actors who extort money from drivers without providing anything in return, rather than as representatives of their interests. Even so, drivers pay their expected fees to syndicates, calculating them along with petrol and the daily *recette* paid to vehicle owners as part of the costs of doing business. Despite the structural antagonism between them, in everyday practice drivers and syndicalists largely maintain friendly relations and spend hours socializing in the daily course of operating saloni routes.

Figure 8: Drivers, owners, and syndicalists chat and rest while queuing to load passengers at Kouté, Yopougon. (Photo: Jacob Doherty, March 5, 2019)

This complex and ambiguous regulatory structure has fundamentally shaped the emergence of taxi-tricycles. By operating on the peripheries of the city, they were less officially supervised than other forms of transport. Even so, saloni owners paid annual *droit de stationnement* fees to the communal governments, equivalent to those paid by shared taxis or commercial delivery three-wheelers. Like gbakas and wôrô wôrôs, they also paid syndicates' one-off and daily charges to operate along their routes. The fact that syndicates are not controlled by the owners of other modes of transport meant that they were open to the possibility of integrating new types of vehicles. From the syndicates' perspective, each new vehicle on a route represented not competition, but a new source of income in the form of daily permits and loading fees. As such, initial investors in each line acted in concert with the controlling local syndicates to introduce tricycles. In this context, between January and May, the number of vehicles grew exponentially, most dramatically, exploding from 3 to 30 in just 4 months at Koweit.

In an effort to resolve this legal ambiguity, on May 2nd 2019 the Ministry of Transportation issued a one page communiqué to clarify the status of taxi-tricycles. The communiqué stated that these vehicles are operating without any authorization or under any regulatory supervision, including the enforcement of requirements on insurance normally applicable to the transport sector. The ministry requested owners to withdraw their tricycles from operation under the threat of confiscation and urged passengers to avoid them for their own safety. While this statement seemed to imply the end of the salonis business, in the

year following the communiqué, the existing routes have continued to operate as before. Moreover, two new lines were created in early 2020 in the Abobo neighborhoods PK 18 and N'Dotré. The only difference drivers reported in their work was that they no longer used any main paved roads during the day. They stopped running occasional on-demand services for clients and waited until night to go to use nearby petrol stations. Rather than resolving ambiguity, the Transport Ministry's communiqué intensifies it by exacerbating the margin between the de-facto and de-jure production of space on the urban periphery and exacerbating the liminal status of salonis.

## The Future of Salonis: Open or Foreclosed?

Like other forms of popular urbanization, the extent to which salonis are able to consolidate and emerge from precarity will depend in great part on the forms of state regulation and control that develop in response (Struele et al, 2020, p. 10). As in Daniel Mains and Eshetayehu Kinfu's (2017) analysis of the governance of three-wheelers in Ethiopia, aesthetic aspirations to urban modernity play a central role the Ivorian state's approach to salonis, underpinning a vision of the urban future that marginalizes popular transport and gives rise to conflicts over infrastructure provision and the right to urban livelihoods. While we cannot know the long-term consequences of the Ivorian Transport Ministry's statement, we foresee three possible trajectories for salonis: illegality, expulsion, and experimentation.

Precedents in the shared taxis sector outline the first possible trajectory: illegality. Although they are not officially authorized, unmarked shared taxis operating between communes have been in service since the 1990s. These clandestine wôrô wôrôs exist in a condition that drivers refer to as "Guantanamo." Because they are not legally recognized, the vehicles often lack proper paperwork and are thus susceptible to police stops and bribery. Syndicates mitigate this risk by pooling payments from drivers to protect them from police stops, but doing so is expensive for drivers, making these lines less profitable and more stressful to the point of being torturous, hence "Guantanamo." Similarly, banalized wôrô wôrôs and old gbakas operate without insurance, permits, or inspection documents in many peripheral areas of the city, on the very routes where taxi-tricycles took root. Thus, one possible consequence of the Ministry of Transportation's policy is that salonis will remain a clandestine service at the edges of the city and increasingly at the mercy of territorial syndicates. In this case, the ban would have the effect of further marginalizing salonis, making drivers' conditions more precarious, and entrenching the role of violent extra-state actors in the transport industry. In this case, salonis would proliferate in the areas marked in Figure 1, territories at the edges of the city's paved road network that are currently served predominantly by the oldest, least safe, and most polluting vehicles in the wôrô wôrô and gbaka fleets. Indeed, in the time since the original research for this article was conducted, we have observed new saloni lines have emerged like those in Abobo in peripheral areas of the city noted in Figure 1, under conditions of legal and regulatory ambiguity.

A second possible trajectory posited by the communiqué is expulsion, with owners withdrawing their vehicles from Abidjan to put them into service elsewhere in the country. While prohibiting their operating in Abidjan, the minister's statement makes room for municipal governments of other cities to develop appropriate policies of their own. In this way, the statement reaffirms a fundamental colonial era differentiation between the city and the interior, between Abidjan and the remainder of the national territory, and between the planned modern city and its spontaneous popular neighborhoods (Freund, 2001). While motorbikes and three-wheelers might be appropriate modes of transport for the smaller cities of the country, they are conceptualized as inherently unsuitable for Abidjan, framed as a rural contagion to be contained and kept out of the city. Abidjan's peripheries emerge as an ambiguous liminal

space where this difference between the city and the country is hard to completely territorialize, an ambiguity with major consequences for the future of salonis.

A third trajectory for the sector could be more experimental. Following the model of distributing three-wheelers to ex-combatants after the post-electoral crisis in 2011, municipalities or the Ministry of Transportation could distribute taxi-tricycles as a means of fostering youth livelihoods and promoting urban mobility. Such a program could encourage the formation of owner-driver co-operatives, offer training in safe driving practices as well as vehicle maintenance and repair and recruit and support more young women to participate in the transport sector (Porter, 2008). Recognizing the valuable service salonis provide at the edges of the urban territory, this approach could help to identify viable routes in underserviced areas, integrate salonis as last-kilometer options to complement existing and planned bus/train routes, and leverage economies of scale to lower the cost of vehicles and push for the electrification and decarbonization of sector.

## Conclusion

In this article we have offered an initial description of a new form of urban infrastructure in Abidjan, three-wheeled taxis locally known as salonis. As with many other instances of "people as infrastructure" (Simone, 2004) in which urban infrastructures have been "devolved onto labor" (Fredericks, 2018, p. 31) under conditions of crisis, austerity, and structural adjustment, salonis are evidence both of the failures of neo-liberal development and of the creative forms of popular urbanization that have emerged in response. In this article, we have shown that salonis provide two vital functions. First, in the context of widespread structural unemployment, they provide livelihoods and easily accessible accumulation strategies for young men and provide a means of entry into other forms of work in the transport sector. Secondly, salonis are an innovative last-kilometer mobility solution that links underserviced communities to main roads and the more extensive urban transport networks that ply them, as well as to vital amenities like markets, hospitals, clinics, and schools. It is through the incremental development of such forms of popular infrastructure in the urban margins, we suggest, that the city itself is produced. We have argued that this new popular transport infrastructure is situated at the intersection of multiple overlapping forms of marginality: 1) the spatial peripheries of the city, 2) the edges of its paved road network, 3) the under-served fringes of the popular transport system, 4) the liminality of the youth who operate the vehicles, and 5) the interstices of the competing regulatory authorities who govern urban space in Abidjan. These multiple forms of marginality have structured the ways the saloni service has taken shape, informing the geographical locations that it has emerged and the types of passengers it serves, as well as the labor relations and modes of control that regulate it. If cities like Abidjan are to chart new paths to sustainable mobility and avoid the vicious cycles and path dependencies of private automobility, they will benefit from learning from the margins by recognizing, supporting, and experimenting with ways to integrate and decarbonize popular innovations such as salonis.

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